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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/697,313	10/31/2003	Gonzalo Gaston	200209836-1	9882
22879	7590	08/02/2005	EXAMINER	
HEWLETT PACKARD COMPANY P O BOX 272400, 3404 E. HARMONY ROAD INTELLECTUAL PROPERTY ADMINISTRATION FORT COLLINS, CO 80527-2400			HSIEH, SHIH WEN	
			ART UNIT	PAPER NUMBER
			2861	

DATE MAILED: 08/02/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/697,313

Applicant(s)

GASTON ET AL.

Examiner

Shih-wen Hsieh

Art Unit

2861

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 31 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3, 7 and 10-19 is/are rejected.
- 7) ☒ Claim(s) 4-6, 8 and 9 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 31 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Claim Objections*

1. Claims 1 and 4 are objected to because of the following informalities:

In regard to:

Claim 1:

1) Please change “a printer of the kind” into ‘a printer of a kind” in line 1 to correct a minor lack of antecedent basis problem.

2) Lines 3-4, please add “moves” after the word “page”, so the recitation will read: “between the print head and page moves in a second direction” or “between the print head and page, which moves in a second direction”. This addition will better describe applicants’ concept, Examiner presumes.

Claim 4

Line 2, please change “some of the groups” into “some groups” to correct a minor lack of antecedent basis problem.

### *Claim Rejections - 35 USC § 102*

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1, 2, 7, 10-12 and 16-19 are rejected under 35 U.S.C. 102(e) as being anticipated by Masuyama et al. (US Pat. No. 6,871,934 B2).

In regard to:

Claim 1:

Masuyama et al. teach in their fig. 6:

A method of operating a printer of a kind comprising a print head having an array of dot printing elements (nozzles 1-512) extending in a first direction (the direction as shown in fig. 4) relative to a page (transmitted in the direction of "t") to be printed and which prints at least a part of the page during relative movement between the print head and page in a second direction at an angle to the first direction, the method comprising performing the following steps:

(A) prior to a print job:

(a) identifying portions of the array of printing elements (such as nozzles 1-32 in the first scan) which will be needed at least for a first pass of the print head relative to the first page of the print job, and

(b) servicing printing elements (by preliminary ejection) according to the array portions identified in step (a) so that one or more printing elements outside the identified array portions are not serviced, and

(B) printing the at least first pass, refer to col. 6, line 37 to col. 7, line 3.

Claim 2:

Masuyama et al. further teach:

wherein substantially all the printing elements outside the identified array portions are not serviced, refer to fig. 6, such as first scan only nozzles 1-32 are serviced (preliminary ejection), nozzles that are not used such as nozzles 33-64 are not serviced.

Claim 7:

Masuyama et al. further teach:

wherein the array of printing elements extends substantially fully across the page in the first direction, refer to col. 11, line 62 to col. 12, line 1 and col. 12, lines 16-25.

Claim 10:

Masuyama et al. further teach:

wherein the printer is an inkjet printer and the dot printing elements are inkjet nozzles, refer to the title for ink jet printer and fig. 6 for nozzles.

Claim 11:

An incremental printer comprising a plurality of printing elements arranged to print different portions of an image, the printer being arranged, prior to printing an image, to identify elements that are not required for printing the image and to implement an element servicing routine, the printer being arranged to exclude one or more of the identified elements from the servicing routine, refer to col. 3, lines 28-45 and col. 13, lines 1-10.

Claim 12:

Masuyama et al. further teach:

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wherein the elements are each arranged to print image content disposed along a respective row or column of the image, those elements having a position in the printer corresponding to a row or column in the image which is to remain unprinted being excluded from the servicing routine, refer to fig. 6. Notes: because those elements that are not used to perform printing will be used to perform printing in the next scan and prints relevant portions of the image inputted from, e.g., a host computer.

Claim 16:

An incremental printer according to claim 11, wherein the printing elements are arranged in a page wide or page high array.

Rejection:

This claim is rejected on the basis as set forth for claim 7 discussed above.

Claim 17:

An incremental printer according to claim 11, wherein the printer is an inkjet printer and the dot printing elements are inkjet nozzles.

Rejection:

This claim is rejected on the basis as set forth for claim 10 discussed above.

Claim 18:

A printer control circuit adapted to control a plurality of printing elements, the elements arranged to print different portions of an image, the circuit being arranged to identify elements that are not required for printing a given image and to implement an print element servicing routine prior to causing the image to be printed, the circuit being arranged to exclude one or more of the identified elements from the servicing routine.

Rejection:

This claim is rejected on the basis as set forth for claim 11 discussed above, and also refer to col. 2, lines 36-37 for a "nozzle use limitation scheme".

Claim 19:

Masuyama et al. further teach:

A computer readable medium containing program instructions which, when executed by a suitable data processing device associated with suitable hardware are adapted to perform the method claimed in claim 1, refer to col. 6, line 64 to col. 7, line 18.

### ***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to

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consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 3 and 13-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Masuyama et al.

In regard to:

Claim 3:

The device of Masuyama et al. DIFFERS from claim 3 in that it does not teach: wherein each array portion identified in step (a) comprises at least one group capable of printing a respective row of halftone values at a given resolution on the page with redundancy among the elements of the group.

Applicants disclosed in their specification page 6, line 20 to page 7, line 7 that halftone printing and redundancy are conventional used and well known in the art respectively. This admission constitutes as prior art.

Therefore it would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify the device of Masuyama et al. to include halftone and redundancy as Applicants admitted for the purpose of providing different halftone value and avoiding artifacts in the printed image.

Claim 13:

An incremental printer according to claim 11, wherein the elements are arranged in redundant groups, the elements in a given group being arranged to print image content in a common range of image positions, the printer being further arranged to



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designate one or more, but less than all, of the elements in one or more of the groups  
ms being available for printing the image and to service substantially only the  
designated elements of those groups prior to printing the image.

Rejection:

This claim, again, talking about “redundancy” and is rejected on the basis as set  
forth for claim 3 discussed above.

Claim 14:

An incremental printer according to claim 13, wherein one or more of those  
groups in which elements are designated as being available for printing the image  
retains printing redundancy.

Rejection:

This claim is rejected on the basis as set forth for claim 13 discussed above.

Claim 15:

The device of Masuyama et al. DIFFERS from claim 15 in that it does not teach:  
wherein the printer is arranged to designate substantially only those elements  
which are not identified as faulty.

Again, as Applicants admit in their specification page 9, lines 4-12 that  
identification of faulty elements is well known in the art.

Therefore it would have been obvious to a person having ordinary skill in the art  
at the time the invention was made to modify the device of Masuyama et al. to include a  
faulty elements identifying device as it is well known in the art for the purpose of  
identifying faulty elements before a printing is to be started.

***Allowable Subject Matter***

6. Claims 4-6, 8 and 9 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

7. The following is a statement of reasons for the indication of allowable subject matter:

In regard to:

Claims 4-6:

The primary reason for the allowance of claims 4-6 is the inclusion of the method step of for at least some groups, reducing the number of elements in the group available for use. It is this step found in each of the claims, as they are claimed in the combination that has not been found, taught or suggested by the prior art of record, which makes these claims allowable over the prior art.

Claims 8 and 9:

The primary reason for the allowance of claims 8 and 9 is the inclusion of the limitation of wherein the at least first pass is the only pass so that the first page is printed in a single pass. It is this limitation found in each of the claims, as they are claimed in the combination that has not been found, taught or suggested by the prior art of record, which makes these claims allowable over the prior art.

***Conclusion***

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

US 6,834,926 B2, "Ink-jet printing apparatus and method, and computer readable memory" issued to Shibata, 12/2004 teaches gray scale values in figs. 3-5 and print elements combination.

US 5,170,261, "printing method" issued to Cargill et al., 12/92 teaches a halftone recording method produced images in a range of tones perceived as a gray scale by the human eye.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shih-wen Hsieh whose telephone number is 571-272-2256. The examiner can normally be reached on 7:30AM -5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dave Talbott can be reached on 571-272-1934. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should

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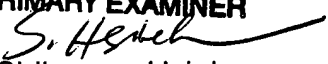
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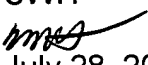
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**SHIH-WEN HSIEH**  
**PRIMARY EXAMINER**

  
Shih-wen Hsieh  
Primary Examiner  
Art Unit 2861

SWH

  
July 28, 2005